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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,046	07/10/2001	Akio Uenishi	50090-308	6444

7590 01/14/2003

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EXAMINER

VU, QUANG D

ART UNIT	PAPER NUMBER
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2811

DATE MAILED: 01/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/901,046

Applicant(s)

UENISHI, AKIO

Examiner

Quang D Vu

Art Unit

2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 2-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims 2-3 and 5-6 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,194,775 to Usami.

Regarding claim 2, Usami (figure 3) teaches a semiconductor device, comprising:

a semiconductor substrate (1);

a first insulating film (2) formed on the semiconductor substrate;

a polysilicon resistor film (6, 7) formed on the first insulating film (2);

a second insulating film (9) formed on the resistor film (6, 7).

It is inherent that the insulating film (13) is a high heat conductor film consisting of a highly heat-conducting material (silicon oxide) formed on the second insulating film (9).

Usami further discloses a pair of terminal wirings (11, 12) formed on the second insulating film (9) and connected to the resistor film (6, 7), wherein a thickness of the high heat conductor film (13) is thicker than a thickness of the resistor film (6, 7).

Regarding claim 3, Usami teaches the thickness of the high heat conductor film (13) is twice the thickness of the resistor film (6, 7) or thicker (see figure 3).

Regarding claim 5, Usami teaches the high heat conductor film (13) is united with one of the terminal wirings (11, 12) (see figure 3).

Regarding claim 6, Usami (figure 3) teaches a semiconductor device, comprising:

a semiconductor substrate (1);

a first insulating film (2) formed on the semiconductor substrate (1);

a polysilicon resistor film (6, 7) formed on the first insulating film (2);

a second insulating film (9) formed on the resistor film (6, 7),

It is inherent that the insulating film (13) is a high heat conductor film consisting of a highly heat-conducting material (silicon oxide) formed on the second insulating film (9).

Usami further discloses a pair of terminal wirings (11, 12) formed on the second insulating film (9) and connected to the resistor film (6, 7), wherein a thickness of the second insulating film (9) located above the resistor film is thinner than a thickness of the resistor film (6, 7), and a thickness of the high heat conductor film (13) is thicker than a thickness of the resistor film (6, 7).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,194,775 to Usami.

Regarding claim 4, Usami differs from the claimed invention by not showing a width of the high heat conductor film is wider than a width of the resistor film. It would have been obvious to one having ordinary skill in the art at the time the invention was made for a width of the high heat conductor film is wider than a width of the resistor film because it depends on the amount of heat that need to be dissipate from the resistor.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang D Vu whose telephone number is 703-305-3826. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on 703-308-2772. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

qv
January 13, 2003

Steven Loh